GOVERNMENT OF INDIA
DEFENCE
LOK SABHA

UNSTARRED QUESTION NO:1226
ANSWERED ON:02.03.2000
DEFICIENCIES IN BULLET PROOF JACKETS
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Will the Minister of DEFENCE be pleased to state:

(a) whether several soldiers and para-military personnel had been to hospital for lack of recoiling capacity of the bullet-proof jackets in the recent past;

(b) if so, the details thereof; and

(c) the specifications prescribed for buying the bullet-proof jackets for the soldiers and in what specification the Government have bought such bullet-proof jackets before and after the Kargil war?

Answer

MINISTER OF DEFENCE (SHRI GEORGE FERNANDES)

(a) to (c): A statement is attached.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF LOK SABHA UNSTARRED QUESTION NO.1226 FOR 2.3.2000.

Army Headquarters have intimated that no data is available with them to indicate that hospitalisation of soldiers was due to lack of recoiling capacity of the bullet proof jackets. Ministry of Home Affairs have also confirmed that no such instances have been reported by the para-military forces.

The prescribed specifications for buying the bullet proof jackets are given in Annexure-I. Procurement of bullet proof jackets before and after the Kargil war has been made as per the prescribed specifications.

ANNEXURE-REFERRED TO IN THE STATEMENT GIVEN IN REPLY TO PARTS (a) TO (c) OF LOK SABHA UNSTAR QUESTION NO.1226 FOR 2.3.2000.

TECHNICAL SPECIFICATION

1. The bullet proof jackets should conform to the Indian Army Technical standards. In addition, the equipment should conform to and US-NIJ standards 0101-03 (as revised from time to time).However, in case where different standards have been specified in performance specifications and the NIJ specification, the more stringent of the two will be considered.

2. Level of protection to be offered by the Hard Armour Plates and Soft armour Jacket material

a. The soft Armour Jacket material should provide protection to all ammunitions falling upto protection level III.A with reference to threat level table enclosed as Appendix 1 to this Annexure.

b. From protection level III A upto level IIISP (similar to threat level posed by Dragunov) special Hard Armour Plate should be provided, which in conjunction with the Soft Armour Jacket provides total protection for ammunition falling in this range.

3. Trauma Effect Trauma pads should be provided to absorb shock. The deformation depth should be reduced to minimum but should not exceed 20 mm in plasticine box at 20 degree C when tested as per NIJ standards.

4. The closing flaps should have velcro fastaners so that it can be worn and taken off quickly and easily.

5. Capability to detect repeated attack. The HAP should be able to withstand seven bullet before it is completely shattered.The bullet should be absorbed and not recochat on striking the plate, irrespective of it being a fare or unfair shot.

6. Service Life. Operational and maintenance should be simple and easy. Bullet Proof Jacket should not be adversely affected by storage under adverse climatic conditions normally met in the services. Service life should not be less than 10 Years.

7. Wearing confort and functionality.

(A)The bullet proof jacket shall conform the Drawing No. (P1 9010000 & P1 9020000) as at Appendix II to this Annexure.The BJP shall conform to the sample submitted by the venders and approved by the users for design, make-shape, dimensions, weight etc.

(c) The bullet jacket should be convenient and comfortable to wear and should not impede the movement of the wearer in carrying out various functions in field.

(d) It should have sufficient ventilation so that there is no ill-effect on the body after wearing for a prolonged time.

(e) The bullet jackets should be quick to wear with a fixed groin pad designed so as to allow easy folding and fastening or groin pad on the front portion of the jacket. Inspection/removal of the HAP should be quick and easy.

(f) Both shoulders should be capable of being opened and adjusted by means of velcro.

8. Outer garment : The colour of the jacket should be that it can be camouflaged easily. The jacket should be in Indian camouflage pattern disruptive.

9. All the closing flaps of the jackets should have velcro fasteners so that it can be worn and taken off easily and quickly.

10. Bullet Trapping: The HAP should be able to withstand seven bullets before it iscompletely shattered. The bullet should be absorbed and not recochet on sticking the plate, irrespective of it being a fair or unfair shot.

11. The HAP should be encased in a suitable material so as to completely arrest the splinters/fragments within the system on being hit by the bullet, irrespective of being a fair or unfair shot.

12. The details performance specifications of bullet proof are given at Appendix I to Annexure.

Appendix 1 to Annexure

Performance Specification: Bullet Proof Jackets

Part 1: OPERATIONAL CHARACTERISTICS

General:

1. The Bullet Proof Jacket should be convenient and comfortable to wear and should not impede the movement of the wearer in carrying out various functions in field.

2. Jacket parts:

The Bullet Proof jacket will consist of the following parts:-

a)Soft Armour Front and Rear including collar : Jacket

b)Groin pad :

c)Hard Armour Plate (9HAP) :

d)Trauma pad :

3. Jacket: Soft Armour Front and Rear including collar and the groin pad will form the jacket.

4. Hard Armour Plat (HAP):HAP SHOULD BE PROVIDE SEPARATELY.Provision is made to add on the HAP in front of the jacket. Provision should also be made at the back of the jacket, to add on HAP, if required.

5. Trauma pad for trauma Asttenuation.: Trauma pad should be provided to absorb shock. The size of the trauma pad should correspond to the six of HAP. The deformation depth should be reduced to minimum, but should not exceed 20mm in plasticine block at 20 degree C.

6. Groin Pad: The Bullet Proof jackets should have the detachable groin pads. Provision should be made to fold the groin pad up and fasten its on to the front portion of the jacket with velcro fastener. The protection level provided by the groin pad should be same as per the rest of the jacket.

7. Collar/Neck pads: The jackets should have fixed collar/neck pads.

8. Pockets with flats: The jackets should be provided with two external pockets to house one 7.62 mm LMB magazine in the each and two external pockets to store one grenade 36 ht in each.

9. Colour of the Jacket: The colour of the Jacket should be such that it can be camouflaged easily. The jackets should be in Indian camouflaged pattern disruptive only.

10. All the closing flaps of the jackets should have velcro fasteners so that it can be won and taken off easily and quickly.

Protection

11. The HAP should as far as possible within constraints of its size specified in par 21, should cover vital parts of the body like heart, lungs, lever spleens, stomach and intensities which can cause fatal injuries.

12. The HAP should be encased in a suitable material so as to completely arrest the splendors/tragments within the system on being hit by the bullet, irrespective of being a fair or unfair shot.

13. The HAP should be encased in a suitable material so as to completely arrest the splinders/tragments within the system on being hit by the bullet, irrespective of being a fair or unfair shot.

14. The bullet proof jacket should be able to provide the following protection level:

a) The HAP in conjuction with Soft Armour, should be able to stop the following at 50 meters:-

i) 7.62mm x 39 mm mild steel Core Amn of AK 47 and AK 56.
ii) 7.62mm x 51mm NAIU Ball
iii) 5.56mm 88-109/m-193 Lead Core Ammunition
iv) 7.62mm x 51mm Indian Ball
v) 7.62mm x 54mm Lead/mild steel Core Ammunition of Dragunov Rifle.

b) The Soft Armour Jacket to include the collar and the groin pad should be able to stock the following at 5 meters:-

i) 9mm x 19mm Parabellum from SMC (Supplier to specify type of wpn/amn that should not be defeated)
ii) 9mm Pistol (Supplier to specify type of wpn/amn that should not be defeated)
iii) 12 bore Short Gun

15. The jacket (as defined in para 2) should provide a minimum protection area of 0.48 meters, for all sizes with adjustable velcros

Waterproof packing

16. All parts of the bullet proof jackets should be encased in waterproof material.

Size And Shape

17. The Bullet proof Jackets should be provided in different sizes i.e. large and medium to suit Indian physique.

18. The HAP should have a in low profile contour shape for snug fit.

19. Provision for belts straps for scientific distribution of weight of the jackets, so as to prevent injury to backbone.

PART II - PHYSICAL CHARACTERISTICS

20. Weight

a) Weight of the jacket as defined In para 3 above not more than 2.5 kgs
b) Weight of HAP not more than 2.6 kgs
c) Weight of the Trauma pad not more than 400 gms
d) Total weight of the jacket complete not more than 5.5 kgs

Note: If the trauma pad is incorporated in the HAP, then the weight of the HAP plus trauma pad should not exceed 3 kgs.

21. Size of HAP Not less than 750 qcms (30 x 25 cms)

22. Service life: Operation and maintenance should be simple and easy. Bullet proof jackets should not be adversely affected by storage under adverse climatic conditions normally met in the services. Service life should not be less than 10 years.

23. Temperature tolerance: The performance of the bullet proof jackets should not be affected adversely by temp variation from - 50 degree C to + 50 degree C and humidity levels of 95 percent at 40 degree C.

24. Outer cover of jacket should be washable.

25. A suitable maintenance manual should be issued for proper maintenance of the jacket.

PART III MISC

26. The equipment should conform to the Indian Army Teststandards. In addition, the equipment should conform to and the US-NIJ standard 0101-03 (as revised from time to time). However, in case where different standards have been specified in performance specifications and the NIJ specifications, the more stringent of the two will be considered.

27. Rear pocket to be provided to the jacket to cater for additional HAP. Six to facilitate easy slip in/take out. Pocket to be waterproof.

28. Adjustable belt made of broad elastic band is provided at the waist region to facilitate distribution of jacket load.

29. Length of shoulder and abdomen joints including velcro fasteners should be such as to enable personalised filament of jacket based on height and built of individual.

30. Outer jacket material to be made of denier urethane coated nylon coated nylon/other suitable material and should withstand rigorous field usage. Cloth material should be waterproof.